Co-Design AI Prompt Deck

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Background

Students yearn to learn emerging technologies to best prepare them for the workplace, including AI. However, they are currently using AI on their own and without proper policies. This may lead to a degradation of critical thinking, problem solving, and creativity skills that were previously instilled since primary school. For UX, irresponsible AI usage risks minimizing critical thinking skills that are necessary for discerning sound design decisions.

Introduction

The Co-Design AI Prompt Deck aims to aid students in augmenting their design process with AI. This tool reinstates the human as the primary decider, and AI as a collaborator. By providing guided prompts and following a structured framework, students are able to learn the design process while drawing inspiration from AI outputs. Additionally, the reflection questions encourage critical thinking and support the human's autonomy in the workflow. This study researches and evaluates the extent as to which this deck assists students in responsibly using AI as a collaborator throughout the design process

Research Questions

This exploratory research is guided by the following questions:

1. How does generative AI affect the cognitive processes of UX designers during different stages of the design workflow?
2. How do designers' perceptions of AI—as collaborator, tool, or competitor—shape their experience, motivation, and quality of output?

Method

Study 1: Semi-Structured Interviews

8 graphic communication students with various experiences in UX participated in semi-structured interviews. A preliminary screener survey was used to ensure the participants matched the scope of the project and allowed for diversified feedback.

The participants were asked to perform an individual design task with the help of the cards which guided them through the AI outputs. After each prompt, they were encouraged to reflect and discuss their thoughts out loud.

Findings

The goal of the Co-Design AI Prompt Deck was to understand how design students currently use AI in their workflow and how guided AI prompts and structured reflective questions can assist them in viewing AI as a collaborative tool rather than autonomous agent. The data from eight semi-structured interviews revealed four themes that speak directly to our goal. Two of the themes address the power behind reflective questioning, and the other two explore how the cards themselves assist designers through the design process.

1. Structured framework provides scaffolded guidance amidst vague AI outputs

- AI outputs are often lengthy and vague, causing users to skim over information and sometimes miss important parts.
- The structured framework of the cards assists users in critically thinking through the outputs, extracting important information, and adding in their original thoughts.

2. Guided prompts increase creative confidence

- Students, especially novice designers, find great value in how the cards help them learn and understand the UX design process.
- It helps them build confidence, therefore cementing foundational skills like critical thinking and decision-making.

3. Reflection questions encourage critical thinking

- Users tend to move quickly through AI outputs without questioning them.
- When prompted with reflection questions, they slow down, evaluate the information more deeply, and engage in thoughtful decision-making.
- This shift leads to stronger outcomes and deeper understanding.

4. Reflection mitigates AI bias

- AI-generated outputs can reinforce stereotypes or overrepresent certain groups.
- When paired with reflection questions, users can identify overlooked perspectives.
- Bias can pose as a risk in the design process if users are over-reliant on the output without reflection.

Discussion

This research study was conducted to learn how students currently use AI in their design process and how augmenting their experience with a structured framework and guided AI prompts could alter their workflow. The findings underscored key areas where the card deck supported student designers. This section will connect this study's findings with the insights from previous studies mentioned and emphasize the future of AI in design education.

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